

# Notice of Allowability

Application No.

09/819,728

Examiner

Vikkram Bali

Applicant(s)

FUJIMOTO ET AL.

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/29/2004.
2. ☒ The allowed claim(s) is/are 2, 5-24, 26, 29-31, 33 and 36-37 (renumbered as 1-28).
3. ☒ The drawings filed on 3/29/2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Vikkram Bali  
Primary Examiner  
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***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Randall Beckers, # 30,358 on 3/29/2005.

The application has been amended as follows:

In claims:

Cancel claims 1, 3-4, 25, 27-28, 32, 34-35 and 38-40.

***Allowable Subject Matter***

2. Claims 2, 5-24, 26, 29-31, 33 and 36-37 (renumbered as 1-28) are allowed.

3. The following is an examiner's statement of reasons for allowance:

Claims 2, 6, 15, 26, 30, 33, 37 and their respective dependent claims are allowed because the prior art alone or in combination fails to disclose or suggest the curved surface estimation device that estimates a three dimensional curved surface model by expressing a restriction that horizontal or vertical pair of length of three dimensional outlines are the same with an energy function and solving an optimization problem of calculating a parameter of the three dimensional curved surface model the energy of which becomes minimum in addition to other limitation of the claim.

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Claims 5, 7, 9, 10, 29, 31, 36 and their respective dependent claims are allowed because the prior art alone or in combination fails to disclose or suggest the outline extraction device evaluates outline likeliness indication a ratio between both series of pixel strings with gradation of an external area of the paper and series of pixel strings with gradation of an internal area horizontally or vertically including a target pixel put of outline pixel candidates obtained by performing edge extraction from the input image and selects a likelier outline pixel candidate as an outline pixel in addition to other limitation of the claim.

Claim 20 is allowed because the prior art alone or in combination fails to disclose or suggest the curved surface estimation device that estimates a three dimensional curved surface model by expressing a restriction that all curves with the same X or Y coordinates have the same length with an energy function and solving an optimization problem of calculating a parameter of the three dimensional curved surface model the energy of which become a minimum in addition to other limitation of the claim.

Claim 21 is allowed because the prior art alone or in combination fails to disclose or suggest the curved surface estimation device uses values corresponding to height of two end points of a three dimensional outline as model parameters of the three dimensional outline model and restricts a location on a condition that points on a three dimensional outline are on a vertical plane including a three dimensional line segment connecting the two end points in addition to other limitation of the claim.

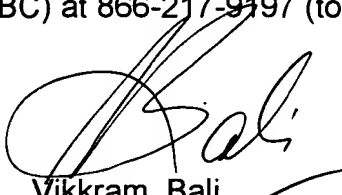
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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 571.272.7415. The examiner can normally be reached on 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571.272.7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vikkram Bali  
Primary Examiner  
Art Unit 2623

vb  
April 4, 2005